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*Hawley's*  
*Condensed Chemical*  
*Dictionary*

*TWELFTH EDITION*

*Revised by*  
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VAN NOSTRAND REINHOLD COMPANY  
New York

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Printed in the United States of America

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115 Fifth Avenue  
New York, NY 10003

Chapman & Hall GmbH  
Pappelallee 3  
69469 Weinheim  
Germany

Chapman & Hall  
2-6 Boundary Row  
London  
SE1 8HN  
United Kingdom

International Thomson Publishing Asia  
221 Henderson Road #05-10  
Henderson Building  
Singapore 0315

Thomas Nelson Australia  
102 Dodds Street  
South Melbourne, 3205  
Victoria, Australia

International Thomson Publishing Japan  
Hirakawacho Kyowa Building, 3F  
2-2-1 Hirakawacho  
Chiyoda-ku, 102 Tokyo  
Japan

Nelson Canada  
1120 Birchmount Road  
Scarborough, Ontario  
Canada M1K 5G4

International Thomson Editores  
Campos Eliseos 385, Piso 7  
Col. Polanco  
11560 Mexico D.F. Mexico

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96 97 98 99 HAM 10 9 8 7 6 5

## Library of Congress Cataloging-in-Publication Data

Condensed chemical dictionary.

Hawley's condensed chemical dictionary.—12th ed./revised by  
Richard J. Lewis, Sr.

p. cm.

ISBN 0-442-01131-8

I. Chemistry—Dictionaries. I. Hawley, Gessner Goodrich, 1905-1983

II. Lewis, Richard J., Sr. III. Title.

QD5.C5 1992

540'.3—dc20

92-18951

CIP

## T

**T.** Symbol for tritium, also for tera-.

**2,4,5-T.** Abbreviation for 2,4,5-trichlorophenoxyacetic acid.

**2,4,6-T.** Abbreviation for 2,4,6-trichlorophenol.

**Ta.** Symbol for tantalum.

**tabun.** (dimethylphosphoramidocyanidic acid, ethyl ester). CAS: 77-81-6.

$(\text{CH}_3)_2\text{NP}(\text{O})(\text{C}_2\text{H}_5\text{O})(\text{CN})$ . A nerve gas.

Properties: Liquid, fp  $-50^\circ\text{C}$ , bp  $240^\circ\text{C}$ , flash p  $172^\circ\text{F}$  ( $77.7^\circ\text{C}$ ), d 1.4250 (20/ $4^\circ\text{C}$ ), readily soluble in organic solvents, miscible with water but readily hydrolyzed; destroyed by bleaching powder, generating cyanogen chloride. Combustible.

Hazard: Very toxic by inhalation, cholinesterase inhibitor, a military nerve gas, fatal dose (man) 0.01 mg/kg.

**"TAC" [Mallinckrodt].** TM for tested additive chemical items, satisfactory for food additives and medical uses.

**tachysterol.** CAS: 115-61-7.  $\text{C}_{28}\text{H}_{44}\text{O}$ .

Properties: Oil, levorotatory, insoluble in water, soluble in most organic solvents, protect from air.

Use: Medicine, as the dihydrotachysterol.

**tackifiers.** Refers to compounds used for making an adhesive stickier.

**tackiness.** (tack). Property of being sticky or adhesive.

**taconite.** A low-grade iron ore consisting essentially of a mixture of hematite and silica. It contains 25% iron. Found in the Lake Superior district and western states.

**tacticity.** The regularity or symmetry in the molecular arrangement or structure of a polymer molecule. Contrasts with random positioning of substituent groups along the polymer backbone, or random position with respect to one another of successive atoms in the backbone chain of a polymer molecule.

See polymer, stereospecific, isotactic.

**Tafel rearrangement.** Rearrangement of the carbon skeleton of substituted acetoacetic esters to hydrocarbons with the same number of carbon

atoms by electrolytic reduction at a lead cathode in alcoholic sulfuric acid.

**Tag Closed Cup.** See TCC.

**tagetes.** A permissible food additive used to increase the yellow color of the skin and eggs of poultry. It is made from the petals of the Aztec marigold (*Tagetes erecta* L.), either ground to a meal or extracted with hexane, with addition of up to 0.3% ethoxyquin.

**tagged atom.** A radioactive isotope used in tracing the behavior of a substance in both biochemical and engineering research, e.g., C-14 or I-131. See tracer, label (2).

**Tag Open Cup.** See TOC.

**tailings.** (1) In flour-milling, the product left after grinding and bolting middlings. (2) Impurities remaining after the extraction of useful minerals from an ore. (3) In general, any residue from a mechanical refining or separation process.

**tailored molecule.** A molecule that has been modified chemically to give it certain properties.

**tails.** Refers to high-boiling impurities that are less volatile than the solvent being distilled.

**talc.** (talcum; soapstone; steatite).

CAS: 14807-96-6.

$\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$  or  $3\text{MgO}\cdot 4\text{SiO}_2\cdot \text{H}_2\text{O}$ . A natural hydrous magnesium silicate. Compact, massive varieties may be called steatite in distinction from the foliated varieties, which are called talc. Soapstone is an impure variety of steatite.

Properties: White, apple-green, or gray powder; luster pearly or greasy, feel greasy, Mohs hardness 1-1.5 (may be harder when impure), high resistance to acids, alkalis, and heat; d 2.7-2.8. Grade: Crude, washed, air-floated, USP, fibrous (99.5%, 99.95%).

Hazard: Toxic by inhalation. TLV: soapstone: 6 mg/ $\text{m}^3$ ; respirable dust 3 mg/ $\text{m}^3$  in air; talc containing no asbestos: 2 mg/ $\text{m}^3$  respirable dust in air.

Use: Ceramics; cosmetics and pharmaceuticals; filler in rubber, paints, soap, putty, plaster, oil-cloth; adherent; dusting agent; lubricant; paper; slate pencils and crayons; electrical insulation.

See also magnesium silicate.